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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,639	10/09/2001	Istvan Kerenyi	LD 11674	9985
7590	10/20/2004			
TIMOTHY E. NAUMAN Fay, Sharpe, Fagan, Minnich & McKee, LLP 1100 Superior Ave., 7th Floor Cleveland, OH 44114-2518			EXAMINER VINCENT, SEAN E	
			ART UNIT 1731	PAPER NUMBER

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,639

Applicant(s)

KERENYI ET AL.

Examiner

Sean E. Vincent

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 17-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 11 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-16 in the reply filed on August 6, 2004 is acknowledged.
2. Claims 17-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Since no listing of the claims was submitted with the election, claims 17-42 are not officially canceled yet. In the response to this office action, a claim listing that shows each of 17-42 as "(canceled)" would be appropriate.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As best understood from the specification [0027] and [0037], the bent section of tube is cooled "either naturally, or under the influence of active cooling means". Claim 14 depends from claim 13 which required active cooling. It is unclear whether "radiation cooling" is active cooling or natural cooling as defined in the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 6, 10 and 12-14 rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura et al (US 4883529). Nishimura et al methods for forming fluorescent lamp tubes (col. 1, lines 11-16) having one curved section comprising fastening one end of a glass tube with a “front chuck” and the other end with a “front support roller” a “rear support roller” and a “bias roller” (see col. 3, line 58 to col. 4, line 24). A heater locally heats a portion of the glass tube and a bending moment is exerted by a turning arm between the two ends of the tube (see col. 4, lines 38-54). Inert gas is directed through the glass tube; “the heat softened portion of the glass tube **15** is bent in response to the circular motion of the turning arm **13** and then hardened after passing the heater **12**.” (col. 5, line 23 to col. 6, line 51). The heater was disclosed by be gas, electric or laser. Although Nishimura et al does not describe part of the bending moment exerted by a re-solidified second bending section of the tube, that would have been inherent in the bending process set forth because there is no holding means between the re-solidified portion and the softened portion of the tube.

7. While Nishimura et al does not expressly state that the inert gas actively cools the bent portion of the glass tube, such a cooling effect would have been inherent in the bending process of Nishimura et al because any forced convection done with gas that is not deliberately heated would have been necessarily well below the solidification temperature of the glass tube. No pre-

Art Unit: 1731

heating of the tube or the gas was discussed in Nishimura et al. As discussed in the 112 rejection above, the definition of active and passive (or natural) cooling has been called into question by claim 14. Further, if claims 13 and 14 are cooled by radiation alone, it would have been inherent in an inert-gas directing step as disclosed by Nishimura et al that cooling would have been faster and necessarily "active" as compared to the radiation cooling claimed by the applicant.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 4, 5, 7-9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al.

11. Nishimura et al did not teach a guiding aperture. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a guiding aperture instead of

Art Unit: 1731

the guiding rollers of Nishimura et al because apertures and rollers would have been effective equivalents in the art, having exactly the same function.

12. Nishimura et al did not teach bending in two sections simultaneously to form a double helix. The examiner takes official notice that the double-helix shape with an S-shaped cold chamber was very well known in the art of making fluorescent lamps (see Tokes et al, Soules et al and Holzer). Furthermore, conversion of the process of Nishimura et al into a double-helix process would have required no more than a duplication of parts of the chuck and rollers holding means and the heater of Nishimura et al. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to bend two sections simultaneously because it would have produced the well-known desirable double helix shape.

13. Nishimura et al did not teach that the bending section was less than six times the diameter of the discharge tube. It would have been obvious to a person skilled in the art at the time the invention was made to limit Nishimura et al to such a bending section length because the specific process conditions recited are not critical but are merely optimal for the particular material being treated and they would be within the skill of the art to determine, *In re Aller et al.*, 105 U.S.P.Q. 233, 42 C.C.P.A. 824. It is the position of the Examiner that it would not require undue experimentation by a person of ordinary skill in the art at the time the invention was made to find these conditions beneficial.

Art Unit: 1731

Allowable Subject Matter

14. Claims 11 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach or fairly suggest pre heating of the glass tubes or varying the internal pressure of the tubes. It would not have been obvious to include either feature in the prior art methods as claimed.

Conclusion

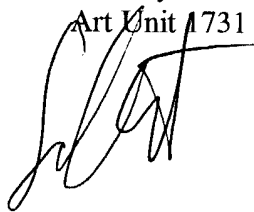
16. The prior art made of record and not relied upon is cited to further show the state of the art.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Vincent whose telephone number is (571) 272-1194. The examiner can normally be reached on M - F (8:30 - 6:00).

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sean E Vincent
Primary Examiner
Art Unit 1731



S Vincent
Monday, October 18, 2004